No. 9500246

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Pioneer Hi-Bred International, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT

'2540'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this thirtieth day of April in the year of our Lord one thousand nine hundred and ninety-six.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions.* FORM APPROVED - OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a).

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*
Pioneer Hi-Bred International, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER
WBE0315X2

3. VARIETY NAME
2540

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
Research and Product Development
Wheat Research
3850 N. 100 E.
Windfall, IN 46076

6. TELEPHONE *(include area code)*
(317) 945-7906

6. FAX *(include area code)*
(317) 945-8313

FOR OFFICIAL USE ONLY

PVPO NUMBER
9500244

FILING DATE
June 29, 1995

FEES RECEIVED
FILING AND EXAMINATION FEE
$ 2325.00 & #125.00

DATE
6/29/95 & 8/7/95

CERTIFICATION FEE
$ 300.00

DATE
August 2 1996

7. GENUS AND SPECIES NAME
Triticum aestivum

8. FAMILY NAME *(Botanical)*
gramineae

9. CROP KIND NAME *(Common name)*
Wheat

10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.) (Common name)*
Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION
Iowa

12. DATE OF INCORPORATION
May 1926

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS
Dr. Gregory C. Marshall
Pioneer Hi-Bred International, Inc.
Wheat Research
3850 N. 100 E.
Windfall, IN 46076

14. TELEPHONE *(include area code)*
(317) 945-7906

15. FAX *(include area code)*
(317) 945-8313

16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow instructions on reverse)*

a. ☑ Exhibit A. Origin and Breeding History of the Variety
b. ☑ Exhibit B. Statement of Distinctness
c. ☑ Exhibit C. Objective Description of the Variety
d. ☑ Exhibit D. Additional Description of the Variety
e. ☑ Exhibit E. Statement of the Basis of the Applicant's Ownership
f. ☑ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository)*
g. ☑ Filing and Examination Fee ($2,450), made payable to "Treasurer of the United States" *(Mail to PVPO)*

17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)?*
☐ YES *(If "yes," answer items 18 and 19 below)* ☑ NO *(If "no," go to item 20)*

18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☐ NO

19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?
☐ YES *(If "yes," give names of countries and dates)* ☑ NO

21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned applicant(s) is(are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *(Owner(s))*		SIGNATURE OF APPLICANT *(Owner(s))*	
Gregory C. Marshall			
NAME *(Please print or type)*		NAME *(Please print or type)*	
Gregory C. Marshall			
CAPACITY OR TITLE U.S. Soft Winter Wheat Coordinator	DATE 7/26/95	CAPACITY OR TITLE	DATE 1

(See reverse for instructions and information collection burden statement)

16A. Exhibit A. Origin and Breeding History of Pioneer Wheat Cultivar 2540

Pioneer cultivar '2540', a soft red winter wheat (Triticum aestivum L., em Thell.), was developed by Pioneer Hi-Bred International, Inc.. Using a pedigree selection breeding method, 2540 was derived from the four parent cross: Pioneer line 'W9018A'/'2548 sib'//'Stella'/'Caldwell'. Pioneer line W9018A was derived from the cross: Pioneer line 'W521'/'S76'. The parentage of Pioneer line W521 is one quarter CIMMYT spring wheat and three quarters soft red winter wheat, although the specific parents are not known. The detailed parentage of 2540 is: W521/S76//2548 sib./3/Stella/Caldwell.

The two single crosses: W9018A/2548 sib. and Stella/Caldwell were made in the 1983 spring greenhouse cycle and designated 'WCC856' and 'WDC431', respectively. During the 1983 fall greenhouse cycle, the two F1's, WCC856 and WDC431, were crossed and the final cross designated 'WBE0315'. The subsequent breeding history of 2540 is shown below.

Year	Generation	
1983	Final cross	Cross designated WBE0315
1984	F1	Grown in spring transplant nursery at Windfall,IN station.
1984-85	F2	Bulk populations grown at Windfall and Ft.Branch, IN. Selections made.
1985-86	F3	Headrows of F2 selections grown at Windfall and Ft.Branch, IN. Heads harvested from selected rows.
1986-87	F4	Headrows of F3 selections grown at Windfall and Ft. Branch, IN. This selection made at Windfall, IN.
1987-88	F5	Headrows of F4 selections grown at Windfall and Ft. Branch, IN. This selection made at Ft. Branch, IN.
1988-89	F6	Headrows of F5 selections grown at Windfall and Ft. Branch, IN. Selected rows cut and threshed separately. This selection made at Windfall, IN.
1989-90	F7	Preliminary yield testing of F5 selection from an F6 headrow. Selection designated WBE0315X2.
1990-91	F8	Advanced yield testing of WBE0315X2. 200 heads harvested from small bulk increase.
1991-1992	F9	Elite yield testing of WBE0315X2. Initial breeder seed increase lost to winterkill.

16A. Exhibit A. (con't.)

1992-93	F10	Elite yield testing continues. Space planted increase planted from remnant seed (F5:9). Offtypes destroyed. Individual heads, plants and bulk seed harvested. Bulk seed constituted breeder seed, then turned over to Pioneer's Parent Wheat Seed Dept. for further increase.
1993-94	F11	Elite yield testing continues, designated as 'YW535'. Pioneer Parent Wheat Seed dept. continues increase.
1994-95	F12	Elite yield testing continues, designated 'XW535'. Pioneer Parent Wheat Seed dept. continues increase.

Decision to release WBE0315X2 was made in August, 1995, at which time it was given the commercial code 2540.

The cultivar 2540 was bred and selected at each generation for any or all of the following characteristics: disease resistance, plant type, plant height, head type, straw strength, maturity, grain yield, test weight, and milling and baking qualities.

2540 has been observed to be uniform and stable since the seventh generation, or the last five generations. Variants may be slightly taller plants or red chaffed plants, neither at a frequency greater than 1/45,000 plants.

16B. Exhibit B. Statement of Distinctness

2540 is most similar to Pioneer cultivar 2548, but with the following distinguishing characteristics:

1) The anther color of 2540 is purple while that of 2548 is yellow.

2) The phenol reaction of 2540 is brown while that of 2548 is ivory (method as described by W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity.

3) 2540 is resistant to soilborne wheat mosaic virus (SBMV) while 2548 is susceptible (Table 1.)

4) 2540 is resistant to wheat spindle streak mosaic virus (SSMV) while 2548 is susceptible (Table 1.)

5) The last internode of the rachis of 2540 is hairy, while that of 2548 is not.

6) The auricles of 2540 are hairy, while those of 2548 are not.

7) The coleoptile color of 2540 is purple while that of 2548 is white.

9500246

FORM APPROVED: OMB NO. 0581-0055

U. S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN AND SEED DIVISION
BELTSVILLE, MARYLAND 20785

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*TRITICUM SPP.*)

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
Pioneer Hi-Bred International, Inc.

ADDRESS (*Street and No. or R.F.D. No., City, State, and ZIP Code*)
Wheat Research
3850 N. 100 E.
Windfall, IN 46076

FOR OFFICIAL USE ONLY
PVPO NUMBER 9500246
VARIETY NAME OR TEMPORARY DESIGNATION
2540
WBE0315X2 (temp. designatio

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. KIND:
[1] 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:
[2] 1 = SPRING 2 = WINTER 3 = OTHER (*Specify*) _____ [1] 1 = SOFT 2 = HARD 3 = OTHER (*Specify*) _____

[2] 1 = WHITE 2 = RED 3 = OTHER (*Specify*) _____

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:
[2][0][6] FIRST FLOWERING [2][1][0] LAST FLOWERING

4. MATURITY (*50% Flowering*):
[ ][ ] NO. OF DAYS *EARLIER* THAN ..... [ ] 1 = ARTHUR 2 = SCOUT 3 = CHRIS
[0][1] NO. OF DAYS *LATER* THAN ..... [7] 4 = LEMHI 5 = NUGAINES 6 = LEEDS 7 = 2548

5. PLANT HEIGHT (*From soil level to top of head*):
[0][9][7] 3 (gm) 1/8/96 CM. HIGH
[0][4] 1 (gm) 1/8/96 CM. TALLER THAN ..... [7]
[ ][ ] CM. SHORTER THAN ..... [ ] 1 = ARTHUR 2 = SCOUT 3 = CHRIS 4 = LEMHI 5 = NUGAINES 6 = LEEDS 7 = 2548

6. PLANT COLOR AT BOOTING (*See reverse*):
[2] 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHER COLOR:
[2] 1 = YELLOW 2 = PURPLE

8. STEM:
[1] Anthocyanin: 1 = ABSENT 2 = PRESENT
[2] Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT
[0][4] NO. OF NODES (*Originating from node above ground*)
[1] Waxy bloom: 1 = ABSENT 2 = PRESENT
[1] Internodes: 1 = HOLLOW 2 = SOLID
[2][2] CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:
[1] Anthocyanin: 1 = ABSENT 2 = PRESENT
[2] Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:
[1] Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 3 = OTHER (*Specify*): _____
[2] Flag leaf: 1 = NOT TWISTED 2 = TWISTED
[1] Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT
[1] Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT
[1][2] MM. LEAF WIDTH (*First leaf below flag leaf*)
[2][2] CM. LEAF LENGTH (*First leaf below flag leaf*):

FORM LMGS 470-6 (6-82) (Formerly Form LPGS 470-6 (3-79), which may be used)

9500246

11. HEAD:

[2] Density: 1 = LAX 2 = DENSE

[4] Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER (Specify) oblong

[4] Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

[2] Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED 5 = BROWN 6 = BLACK 7 = OTHER (Specify): _____

[0 8] CM. LENGTH [1 3] MM. WIDTH

12. GLUMES AT MATURITY:

[2] Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.) 3 = LONG (CA. 9 mm.)

[3] Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.) 3 = WIDE (CA. 4 mm.)

[2] Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 4 = SQUARE 5 = ELEVATED 6 = APICULATE

[3] Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

[3] 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

[-1] 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

[2] 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

[1] Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL

[1] Cheek: 1 = ROUNDED 2 = ANGULAR

[2] Brush: 1 = SHORT 2 = MEDIUM 3 = LONG

[2] Brush: 1 = NOT COLLARED 2 = COLLARED

[4] Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN 4 = BROWN 5 = BLACK

[3] Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify) _____

[0 7] MM. LENGTH [0 3] MM. WIDTH [3 7] GM. PER 1000 SEEDS

17. SEED CREASE:

[1] Width: 1 = 60% OR LESS OF KERNEL 'WINOKA' 2 = 80% OR LESS OF KERNEL 'CHRIS' 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

[1] Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT' 2 = 35% OR LESS OF KERNEL 'CHRIS' 3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[2] STEM RUST (Races) _____ [2] LEAF RUST (Races) _____ [0] STRIPE RUST (Races) _____ [0] LOOSE SMUT

[2] POWDERY MILDEW [0] BUNT [ ] OTHER (Specify) _____

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[0] SAWFLY [0] APHID (Bydv.) [0] GREEN BUG [0] CEREAL LEAF BEETLE

[ ] OTHER (Specify) _____ HESSIAN FLY RACES: [0] GP [0] A [1] B [1] C [0] D [1] E [0] F [1] ø L

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	2548	Seed size	2548
Leaf size	2545	Seed shape	2548
Leaf color	2545	Coleoptile elongation	
Leaf carriage	2545	Seedling pigmentation	2548

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

(a) L.W. Briggle and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.

(b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

16D. Exhibit D. Additional Description of the Variety.

1) Yield and agronomic data.

Preliminary yield testing of 2540 began in the 1989-90 growing season and wide scale testing has been conducted from the 1990-91 growing season to the present. It has shown adaptation to the northen soft red winter wheat regions based on tests conducted in Michigan, Ohio, Indiana, Illinois, and Missouri (Table 1).

2) Information on reaction to major diseases.

Leaf rust - Very good resistance to prevalent races in the northern soft wheat region. Postulated to have Lr2a and unidentified gene(s) based on seedling tests conducted by the Cereal Rust Lab, St.Paul, MN.

Powdery mildew - Very good resistance to prevalent races of powdery mildew in the soft wheat region.

Soil Borne Mosaic and Wheat Spindle Streak Mosaic virus - Excellent resistance to both viruses.

Leaf Blights - Very good tolerance to the complex of most common organisms which cause leaf blights including: Septoria tritici blotch, Septoria nodorum blotch, and tan spot.

3) Information on reaction to major insects.

Hessian Fly - Susceptible to the predominant biotypes of Hessian fly in the northern soft wheat region. Has screened susceptible to biotypes B, C, E, and L in tests conducted by the Dept. of Entomology, Purdue University, in conjunction with the USDA-ARS Insect and Weed Control unit.

4) Information on milling and baking qualities.

2540 has demonstrated acceptable milling and baking qualities as compared to current predominant soft wheat varieties (Table 2).

Table 1. Varietal yield performance and agronomic characteristics recorded in Pioneer Elite yield tests during the period 1992-94.

Variety	grain yield	test weight	plant height	head date	winter surviv.	leaf rust	leaf blight	powd. mil.	SBMV+	SSMV
	bu/ac	lb/bu	cm	Jan.1	1-9@	1-9@	1-9@	1-9@	1-9@	1-9@
2540	**89.9**	**57.0**	**93**	**138.3**	**5.6**	**7.5**	**5.5**	**7.7**	**7.5**	**7.0**
2548	83.5	57.6	91	137.8	4.7	6.0	5.3	7.1	2.5	4.0
2555	85.5	56.9	98	137.1	4.9	4.3	5.5	6.3	7.5	8.0
2510	84.9	56.3	93	140.2	5.8	7.5	7.0	5.7	8.2	8.0
Cardinal	77.9	56.6	106	139.5	5.0	5.5	5.5	4.8	3.7	6.5
Clark	70.2	56.8	98	133.6	5.2	3.3	4.8	5.7	7.2	7.0
lsd(0.05)	3.0	0.7	2.4	1.0	0.7	1.5	1.5	0.9	1.1	0.9
# loc.	29	17	6	6	6	2	2	6	3	1
# year	3	3	3	3	2	1	1	2	3	1

@ Scale of 1 to 9, where 9 = excellent or resistant: 1 = poor or susceptible.
+ Data collected at the University of Illinois SBMV nursery.

Data in the above table gathered at: Truxton, MO, Altamont, IL, Mascoutah, IL, Carlisle, IN, Westport, IN, Ft. Branch, IN, Windfall, IN, Napolean, OH, Pitsburg, OH, Bucyrus, OH, Blissfield, MI.

Table 2. Soft wheat quality data from the Pioneer Quality Lab, Johnston, Ia, 1991-1994.

Variety	flour yield	break flr yld	grain protein	AWRC	cookie	top grain	top grn abnorm.	mill score	bake score
	%	%	%	%	cm	1-9@	1-9@	1-9@	1-9@
2540	**70.9**	**35.6**	**8.7**	**56.2**	**19.3**	**5.1**	**6.4**	**5**	**6**
2510	73.3	36.9	8.2	57.7	19.2	4.3	7.3	7	5
2548	70.7	35.0	8.2	58.1	18.6	4.0	5.0	5	4
2555	72.9	39.3	8.1	56.2	19.6	5.6	7.1	8	8
Cardinal	72.6	34.8	8.6	55.2	19.4	5.0	6.7	6	6
Clark	69.8	33.5	8.8	56.4	19.1	5.0	5.7	4	5
# observ.	11	11	11	11	11	11	11		

Trait abbreviations used in the above table.

AWRC = Flour Alkaline Water Retention Capacity (%)

Cookie = Cookie diameter in cm.

Top grain = Top grain rating of cookie, 1-9 scale (1=poor, 9=excellent).

Top grain abnorm. = Top grain abnormalities of cookie, 1-9 scale, (1=narrow valleys, 9=wide valleys).

Mill score = milling score, a rating which weights flour yield 60% and break flour yield 40% (1=poor, 9=excellent).

Bake score = Baking score, a rating which weights cookie spread 60% and AWRC 40% (1=poor, 9=excellent).

16E. Exhibit E. Statement of the Basis of Applicant's Ownership

The variety, '2540', for which plant variety protection is sought, was developed by employees of Pioneer Hi-Bred International, Inc., Research and Product Development. By agreement between employees and Pioneer Hi-Bred International, Inc., all rights to any invention, discovery or development while an employee are assigned to Pioneer Hi-Bred International, Inc. with no rights retained by the employee.

Pioneer Hi-Bred International, Inc., Research and Product Development, believes it is the sole, original, and first breeder of the 2540 variety of soft red winter wheat for which it solicits a certification of protection.